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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

STEADMAN, DAVID J

ART UNIT	PAPER NUMBER
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1652

DATE MAILED: 06/13/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/403,269

Applicant(s)

LINDAHL ET AL.

Examiner

David J. Steadman

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 28 May 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.
- NOTE: _____.
3. ☒ Applicant's reply has overcome the following rejection(s): see attached.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: 103-106 and 108-112.

Claim(s) objected to: 25, 47, 67, 68 and 72-75.

Claim(s) rejected: 21-24, 26-46, 48-66, 69-71, 76-102 and 107.

Claim(s) withdrawn from consideration: 8, 19 and 20.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

ADVISORY ACTION

Application Status

Claims 8 and 19-112 are pending in the application.

Claims 8, 19, and 20 remain withdrawn from consideration.

Claims 103-106 and 108-112 are in condition for allowance.

Claims 21-24, 26-46, 48-66, 69-71, 76-102, and 107 stand finally rejected.

Claims 25, 47, 67, 68, and 72-75 are objected to as being dependent upon a rejected base claim.

1. Applicants' amendment to claims 21, 36-38, 40, 43, 58-60, 62, 65, 79-81, 83, 86, 93-95, and 97 and addition of claims 103-112 in Paper No. 16, filed on 05/28/02 is acknowledged and has been entered.
2. The request for reconsideration has been considered but does not place the claims in condition for allowance for the reasons discussed below.
3. The rejection of claims 37, 59, 80, 94, and 107 under 35 U.S.C. 112, second paragraph, is maintained. Applicants argue the amendment to the claims clarifies the claimed subject matter. Applicants' argument has been fully considered but is not found persuasive to overcome the rejection. The claims remain unclear as to how a polynucleotide can encode a polypeptide, e.g., SEQ ID NO:13 and simultaneously be a deletion mutant of said sequence.
4. In view of applicants' amendment to claims 43 and 65 to limit the claims to those polynucleotides encoding polypeptides with glucuronyl C5-epimerase activity, the written description rejection of claims 47, 67, 68, and 72-75, under 35 U.S.C. 112, first paragraph, is withdrawn.
5. The written description rejection of claims 21-24, 26-46, 48-66, 69-71, 76-102, and 107 under 35 U.S.C. 112, first paragraph, is maintained. Applicants argue the specification provides sufficient written description to fully describe the claimed genus of polynucleotides and that by amendment the claims are limited only to those polynucleotides encoding polypeptides with glucuronyl C5-epimerase activity. Applicants' argument has been fully considered but is not found persuasive to overcome the rejection. It

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is noted the polynucleotide of claim 107, which is a deletion variant of the polynucleotide of claim 103, is not so limited to encoding a polypeptide having glucuronyl C5-epimerase activity. The rejection of claims 21-24, 26-46, 48-66, 69-71, and 76-102 is maintained because, while the claims are limited to polynucleotides encoding polypeptides with glucuronyl C5-epimerase activity, the structures of the claimed polynucleotides have not been adequately described in the specification. One of skill in the art would recognize that the genus of polynucleotides of claim 21, encoding glucuronyl C5-epimerases having at least 95 % identity to the peptides of parts (a)-(d) and (g)-(m) of claim 21 is not sufficient to describe the structures of the the genus of claimed polynucleotides. Furthermore, one of skill in the art would recognize that the genus of polynucleotides encoding glucuronyl C5-epimerases of claims 43, 65, 79, 80, and 86 that hybridize under the recited low stringency conditions to polynucleotides encoding the peptides of parts (a)-(d) and (g)-(m) of claim 43 or hybridizes under the recited low stringency conditions to the polynucleotide fragments of parts (a) and (d)-(f) of claims 65, 79, and 80 or parts (a)-(c) of claim 86 are not sufficient to describe the structures of the genus of claimed polynucleotides. Provided the recited fragments, including internal deletion mutants of a polypeptide or polynucleotide, one of ordinary skill in the art would not be able to visualize or recognize the identity of the members of the genus of polynucleotides encoding glucuronyl C5-epimerases. Such fragments *are not* of sufficient size such that one can visualize or recognize the identity of the members of the genus of polynucleotides encoding all polypeptides *comprising* the recited nucleotide or amino acid fragments having glucuronyl C5-epimerase activity. Thus, a skilled artisan would recognize that applicants were *not* in possession of the claimed genus of polynucleotides. The rejection is maintained for the reasons of record and for the reasons stated above.

6. In view of applicants' amendment to claims 43 and 65 to limit the claims to those polynucleotides encoding polypeptides with glucuronyl C5-epimerase activity, the scope of enablement rejection of claims 47, 67, 68, and 72-75, under 35 U.S.C. 112, first paragraph, is withdrawn.

7. The scope of enablement rejection of claims 21-24, 26-46, 48-66, 69-71, 76-102, and 107 under 35 U.S.C. 112, first paragraph, is maintained. Applicants argue the examiner has provided no factual

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evidence and the rejection is based solely on examiner's assertions. Applicants argue that by amendment the claims are limited to those polynucleotides encoding polypeptides with glucuronyl C5-epimerase activity. Applicants' argument has been fully considered but is not found persuasive to overcome the rejection. It is noted the polynucleotide of claim 107, which is a deletion variant of the polynucleotide of claim 103 is not so limited to encoding a polypeptide having glucuronyl C5-epimerase activity. While being enabling for the polynucleotide of SEQ ID NO:12 encoding the polypeptide of SEQ ID NO:13, applicants disclosure is *not* enabling for the scope of polynucleotides broadly encompassing *all* polynucleotides comprising a nucleotide sequence encoding a glucuronyl C5-epimerase having at least 95 % identity to the peptides of parts (a)-(d) and (g)-(m) of claim 21, that hybridizes under the recited low stringency conditions to polynucleotides encoding the peptides of parts (a)-(d) and (g)-(m) of claim 43, hybridizes under the recited low stringency conditions to the polynucleotide fragments of parts (a) and (d)-(f) of claims 65, 79, and 80 or hybridizes under the recited low stringency conditions to the polynucleotide fragments of parts (a)-(c) of claim 86 from any source, including internal deletion mutants. Applicants have not disclosed the amino acids of the polypeptide of SEQ ID NO:13 necessary for a catalytically active polypeptide having glucuronyl C5-epimerase catalytic activity. Furthermore, one of skill in the art would recognize that the polypeptide fragments, including internal deletion mutants, encoded by the claimed polynucleotides are of insufficient length to possess glucuronyl C5-epimerase activity. Therefore, in addition to isolating the broad scope of claimed polynucleotides, one of skill in the art must identify *all* amino acids of the polypeptide of SEQ ID NO:13 required for glucuronyl C5-epimerase activity. Applicants' disclosure does not enable one of skill in the art to make the polynucleotides as broadly encompassed by the claims.

8. In view of applicants' argument and amendment to claims 21 and 43 to limit the claimed polynucleotides to those encoding polypeptides having glucuronyl C5-epimerase activity, rejection of claims 21, 31, 33, 38-40, 43, 53, 55, and 60-62 under 35 U.S.C. 102(b) as being anticipated by Wilson et al. (Nature 368:32-38, 1994) is withdrawn. The polynucleotide as taught by Wilson encodes only the first

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7 amino acids of the polypeptide of SEQ ID NO:7 and the polynucleotide as taught by Wilson is not disclosed as encoding a polypeptide with glucuronyl C5-epimerase activity.

9. In view of applicants' argument and amendment to claims 21, 43, 65, and 86 to limit the claimed polynucleotides to those encoding polypeptides having glucuronyl C5-epimerase activity, rejection of claims 37, 59, 80, and 94 under 35 U.S.C. 102(b) as being anticipated by Voet et al. (Biochemistry, 2nd Ed., John Wiley and Sons, Inc., 1995) is withdrawn. There is no evidence provided by Voet or evidence of inherency that the polynucleotides as taught by Voet will encode polypeptides exhibiting the claimed catalytic activity. Furthermore, the claims are drawn to polynucleotides encoding *polypeptides*. Therefore, the claims are limited to a polynucleotide encoding more than one amino acid.

10. In view of applicants' amendment to claim 86 to limit the claimed polynucleotides to those encoding polypeptides having glucuronyl C5-epimerase activity, rejections of claims 86, 87, 90, 91, and 95-98 under 35 U.S.C. 102(b) as being anticipated by and claim 99 under 35 U.S.C. 103(a) as being unpatentable over Xue et al. (Cell 72:681-93, 1993) are withdrawn. Xue et al. do not teach or suggest their polynucleotide encodes a polypeptide having glucuronyl C5-epimerase activity. The polypeptide encoded by the polynucleotide of Xue et al. is disclosed as having an as yet uncharacterized activity, although the suggested activity is related to the regulation of cytoplasm flow (page 690).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Steadman, whose telephone number is (703) 308-3934. The Examiner can normally be reached Monday-Friday from 7:30 am to 2:00 pm and from 3:30 pm to 5:30 pm. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Ponnathapura Achutamurthy, can be reached at (703) 308-3804. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Art Unit receptionist whose telephone number is (703) 308-0196.

David J. Steadman, Ph.D.


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